CLAIMS

1/ A time-shared communications architecture for
communicating digitized information for an industrial
process control system, which architecture is organized
5   around at least one industrial local area network (6)
conveying deterministic traffic between various
programmed operating units (11, 10, 8, 4'), which units
process and store information which can be accessed by at
least one other programmed operating unit (11, 10) via
10   said architecture, said architecture being characterized
in that it includes various programmed operating units
(10, 8, 4') in particular comprising units situated at an
intermediate level (8) or at a process interface level or
at a site monitoring/control device level (4'), which
15   units individually include servers (9) of the HTTP type
so as to be capable of sending optionally interactive
computer documents in response to requests received from
another unit (11) of the system or from a computer, in
particular external to the system, equipped with an
20   HTTP/TCP/IP protocol stack and acting as a customer, in
the context of messaging traffic making use of the
transmission possibilities constituted by the time slots
left available by the deterministic traffic of the
industrial local area network(s) (6, 6') of the system,
25   without disturbing the priority interchange related to
the real time control of the process.

2/ An architecture according to claim 1, for an
industrial process control system, in which programmed
30   site units (18, 18', 18", 18"', 18"") are organized in
one or more clusters around at least one industrial local
area network (19) of the site bus type which is specific
to a cluster and which connects the units of the cluster
to at least one shared programmed unit (17), optionally
35   serving as a gateway or as a router to another industrial
local area network (20) serving at least one other
programmed unit (14, 15) of a higher level of the

architecture, in particular a supervision unit and/or a
unit serving as a gateway to an external communications
network (0), so that the HTTP server of a cluster unit
equipped with such a server responds with an optionally
5 interactive computer document if a request is addressed
to it, via at least one of the networks, by another unit
or by a computer, in particular external to the system,
equipped with an HTTP/TCP/IP protocol stack and acting as
a customer, when the request concerns inserting or
10 extracting parameters and/or variables stored at the unit
that includes said server.

3/ A method of communicating information for an
industrial process control system, in which method
15 digitized information that is necessary to control the
industrial process is interchanged in real time and in a
manner internal to the system over at least one site
network, in a deterministic mode, between at least one
site device such as a sensor or an actuator, and at least
20 one intermediate-level programmed operating unit or at
least one higher-level programmed operating unit, said
method being characterized by the fact that, in order to
enable a user external to the system to access
information stored in said site device or in said
25 programmed operating units via an Internet or Intranet
type network connected to one of the units, interchange
is performed using the HTTP/TCP/IP protocol between the
device in which said information is stored, which device
may be a site device or an operating unit, and the
30 intermediate-level or higher-level operating unit to
which the Intranet or Internet network is connected, for
available time slots provided over the site network by
the deterministic interchange mode.